REMARKS

The last Office Action of October 2, 2007 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-9 are pending in the application. Claims 1, 2, 4, 5, and 7 have been amended. Claims 3, 6, 8 and 9 have been cancelled. No claim has been amended. No amendment to the specification has been made. No fee is due.

Claims 1-9 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by U.S. Pat. No. 6,118,245 to Sienz et al. (hereianfter "Sienz"). Claims 1 and 7 have been amended to more clearly recite the subject matter of the invention.

Claim 1, as amended herein, recites a method for controlling a linear motor having a primary movable machine part comprising windings and a secondary fixed machine part comprising permanent magnets. The method includes the steps of moving the movable machine part along a movement path which is partially covered, measuring a magnetic field produced by the permanent magnets at a position along the movement path; and setting a position-dependent parameter of a control unit controlling a speed or position of the movable machine part based on the measured magnetic field.

Claim 7, as amended herein, recites an apparatus for controlling a linear motor having a primary movable machine part comprising windings and a secondary fixed machine part comprising permanent magnets, said permanent magnets having a cover which modifies a magnetic field along a section of a movement path of the movable machine part, comprising: a sensor for measuring the magnetic field along the movement path; a memory unit for storing position-dependent parameters derived from the measured magnetic field; and a control unit for controlling a speed or position of the movable machine part based on one or more of the position-dependent parameters stored in the memory unit.

The present invention is directed to setting parameters for controlling a linear motor based on the position of the movable machine part, in particular where a section of the stationary machine part with permanent magnets is covered. The cover affects the magnetic field strength transmitted from the permanent magnets through the cover, so that the magnetic field in sections with a cover and without a cover is different. This produces a different force constant on the motor and hence requires a different setting of the motor controller.

The control parameters derived from the measured magnetic field are stored, for example, in a memory of the controller, and position-dependent parameters are supplied continuously to the motor controllers.

Conversely, Sienz discloses a control process for motors which employs instead of the differentiator 250' an additional sensor 250 which is directly located on or inside the synchronous linear motor. This sensor 250 directly determines the speed of the primary part of the motor and supplies a corresponding signal to the subtractor 120. The determination of the speed can be derived, for example, directly from the time dependence of the magnetic field at the sensor location.

Sienz's sensor 250 is a coil sensor which operates on the basis of induction and therefore is responsive only to a time change in the magnetic field. Sienz's sensor 250 is therefore capable of directly measuring the speed of the movable machine part. Importantly, however, Sienz does not measure the magnetic field strength directly as function of the location of the movable machine part.

Accordingly, one difference between the present invention and Sienz is that the sensor of the present invention measures the magnetic field strength at the location where the windings of the primary movable machine part interact with the magnetic field produced by the fixed permanent magnets, wherein the magnetic field may be altered, for example weakened, by a cover applied over the permanent magnets. The parameters derived from the altered magnetic field are then used to control the linear motor, without directly measuring the speed.

Such direct measurement of a position-dependent magnetic field and derivation of control parameters is not taught or suggested by.

For the reasons set forth above, it is applicant's contention that Sienz neither teaches or suggests the features of the present invention, as recited in claim 1.

As for the rejection of the retained dependent claims, these claims depend on claim 1, share its presumably allowable features, and therefore it is respectfully submitted that these claims should also be allowed.

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the claims on file. It is thus felt that no specific discussion thereof is necessary.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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